around indexicals

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> Adam was unconsciously a great philosopher when he first uttered the word I. Think how subsequent philosophers have laboured, how they have created mountains of argument hanging on a hair in order to explain this little word; and yet they have never arrived at a full understanding and a clear definition.
>
> Ahad Ha'am, "Past and Future"[1]

Gottlob Frege tried to reconcile his notion of thought, defined as that entity read off sentences capable of being true or false, with the fact that a sentence containing indexicals shifts in truth value: "I am happy" changes in truth value depending on who utters it; "today is Tuesday" is true on Tuesdays and otherwise false, no matter who utters it.[2] Why do natural languages, unlike logical artificial systems, need indexicals? Frege had one answer; other answers involve the nature of self-knowledge and attribution of self-awareness[3] and the need for statements to possess contents in order to stand in inferential relationships (we want logic to capture at least some natural inferences). My strategy is different.

1. Meaning

Understanding an indexical sentence involves more than one stage. Consider a token, F1, of

F: I am having fun now.

uttered on one occasion by S. A full interpretation of F1 yields that S is having fun at the time F1 is produced. However, producing sounds takes

[1] Ahad Ha-'am, "Past and Future" (1891), now in his *Selected Essays* (Philadelphia, 1911), 80.

[2] "Logical Investigations" (1918–1926), now in Frege (1984).

[3] See, e.g., Castañeda (1989) for the former, and Bar-Hillel (1970) for the latter.

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time, and it may very well be that while S utters F1 the party turns sour and he is not having fun anymore. Is what S said true? Even more intricate questions involve the first-person pronoun. A Cartesian and a Buddhist, despite their disagreement in metaphysics, i.e., their different conceptions of their own self, can understand F1 produced (uttered) by S. Ditto for "this," "that," and "yesterday." How is that possible?

Kaplan and Perry reply that a sentence containing an indexical encodes a singular proposition: a structured entity that has an individual as a component. That individual is referred to by the indexical term by means of its character. To understand a general proposition, for example, "Every woman is pretty," we do not need to identify any particular woman: the sentence is true iff, in the assumed domain, every woman is pretty. On the other hand, to evaluate "My mother is pretty" we need a more complex apparatus. We need to know who produced the token, identify his/her mother, and then check whether that mother is pretty. Three features of that theory make it appealing.

Firstly, it keeps the intuition that indexicals have two levels of significance (Character and Content). "I" and "you" differ in character: they are differently lexicalized. Thus, F1 tells us that whoever produced it has fun at its production time. What it does not tell is who has that pleasant condition, and when (for an instant? a lifetime?).[4] Truth value can be assigned only when we identify F1's producer and the time at which it was produced. So, a dual account of significance for indexicals seems to be in order.

Secondly, it accounts for the intuitive rigidity of indexical terms. Once they get hold of their referents, they keep them across possible worlds. A sentence such as "if today were yesterday, it would be Saturday" uttered on Sunday can be true only on the rather bizarre circumstance in which today (the very day of the utterance, hence a Sunday) were not what it is. Similarly for sentences that involve imaginable conditions such as "with the gravity of the moon, I can beat the jumping champion." The sentence is about me, though I am not on the Moon.

Thirdly, the apparatus of character and content leaves it open which mechanisms are behind our capacity to fill in the slots characters provide.

[4] The misleading idea that there is one level only of signification seems to be at the root of some extravagant claims made by some philosophers; see my (1995).

We can use contextual clues, pragmatic principles, perceptual saliency, gestures, deductions of what is relevant with regards to the interests and presumed goals of the speaker, and so forth. The character is seen as sets of instructions that guide the search. The character of "She" requires the interpreter to look for one female who is, e.g., perceptually salient to the utterer. The orthodox theory is thus an improvement upon the Fregean approaches. Frege's category of *Sinn* is ill at ease with indexicals.[5] A *Sinn* is in some ways like and in some ways unlike Kaplan's character. The important difference is that character supplies only an individual to content, not necessarily any mode of presentation. There is a fairly clear sense in which (at least some) indexicals are endowed with automatic[6] procedures. Kaplan calls them "pure": once tokened they refer without, as it were, intermediate entities. So "I" harpoons the speaker and "here" the place where he speaks.

There is no need to concede that uses of the first-person pronoun imply specific ego-based or even private one-owner-only concepts.[7] They may be based on psychological fact dependent upon proprioceptive capacities or even more sophisticated apparatus capable of distinguishing a subject and the rest, together with some sort of meta-representational ability to express all of this. None of this bears directly on semantics. "Here" and "now" may rigidly refer without its being evident what they refer to. Lexically they share a contrastive feature. *Here* may be London, the seat of a particular chair, or this planet; *now* may be the time of production of a sentence, a day, a

[5] For a review of Frege's difficulties see Perry (1993). Perry's views and terminology changed since then. The postscript adds insights accommodating some of Gareth Evans' quasi-Fregean views. On the more recent revisions see the new edition of 2000, as well as his (2001). The arguments seem correct: Frege's strategy is deficient. The main problem, in my opinion, is that it is virtually impossible to fit indexicality within a framework that is built around a formal artificial language, with some tenuous links to natural languages.

[6] I adopt Perry's terminology; see (1997), diagram on p. 595. Note that in the pioneering work of Castañeda (1989) and Bar-Hillel (1970) one finds no indication of the distinction between pure and demonstrative indexicals.

[7] "Now everyone is presented to himself in a special and primitive way, in which he is presented to no one else" writes Frege, in "The Thought" (1984, 359). The passage is the ancestor of many views insisting on the privacy of the first person, or even stronger on the impossibility of describing and capturing what it feels like to be a bat, or Catherine the Great.

century. All the same, *here* is not there. Semantically, what indexicals possess is a contrastive element; their lexical meaning leaves it open how wide is their area of application.

2. Some Problems with the Current Orthodoxy

The paradigmatic case of indexical purity is something like an utterance of "I am here" in the dark. The voiceprint backtracks to me in the memory of those who know me, the actual phonetic production is traced to a location, and if everything goes well, the one who gropes in the dark then understands that Adriano is in that neck of the wood. Several people, prodded by modern developments[8] observed that we need more than a simple set-up with speakers, utterances, times, and places. Consider the ever more prevalent "I am not here now, but after the tone leave your message, etc." To complicate matters, consider the skilful historian: "now, on this fateful day in the spring of 1945, Goebbels poisons his children, his dogs and his wife."

We need to relinquish some of the rigidity of the standard theory. What counts as context of utterance is not always correctly parametrized to speakers, places, and times of utterance. What I just did with the Nazi example was to ask the reader to change the temporal dimension, and accept that I refer in the present tense to 1945. This requires some extremely sophisticated moves, more surprising because we do it effortlessly all the time. The theory of "now" in historical recounting may perhaps be put down to a form of discourse anaphora. But there are cases in which no prior discourse affords the anaphoric approach. Consider the following real-life story. My colleague Y asks me to write (produce a token then) of

O: I am not here today. Please leave your papers at the main office.

I take the paper on which I wrote O and pin it on Y's door. In that case, we naturally switch between a direct reference model and a semi-citation model. The "I" in O is tracked not to me, who wrote it, but uses a pragmatic consideration (the door is of Y's office) to assign to "I" the reference Y. Then we go back to the literal approach: "here" and "today" in O refer to the day the slip hangs on the door and to where it is. O can be reused

[8] See Eros Corazza and Stefano Predelli on the "answering machine paradox," which is really a tension between available data and theories.

whenever another faculty member is away (Perry 1997, 592). It turns out that there is an ambiguity to dispel for indexicals: it seems implausible to have different lexical entries for the "I" in O and in F. Perry, following Kaplan, puts "I" among the automatic and narrow terms. It is enough to write or utter "I" for me to refer to me. O seems to suggest that even for the first person pronoun, there may be directing intentions at work. O shows, I think, that the circumstances direct the reader to my friend and not to me. In the historical case, discourse effects force a context not identical to the context of utterance. It may be a case of pretence. Similarly in performing a play a character may say "I die now satisfied." It is understood this is true, for the character dies satisfied. That is the opposite of what Frege wrote (1984, 163). Let us call signs, intended to have only sense, "representations." The words of the actor on stage are, then, representations. The actor is not using the first-person pronoun improperly, for her intention guides the listener to a context (resting anaphorically on the entire play together with the awareness that it is a play).

Answering machines and the like have something in common with the case of O, for they too allow multiple uses and multiple users for a single token. I may use a recording of another person's voice in my recorded message "I am not here now." If the surprise in not hearing my voice is overcome, people would know how to interpret what they hear by taking the context of utterance (tokening) as different from the context of reception. I may thus borrow someone else's token to refer to myself. What is said is thus false at the time of production and true at the time of reception. As in O the first-person pronoun maintains its referential stability while the "here" and the "now" depend partly upon the context of production and partly on the context of reception. The "now" appears to play the same semantic role played by "today" in O. Thus, "I am here now" is not only non-analytic; it is not even true whenever it is uttered, either.[9]

A more radical problem with the current orthodoxy is that one parameter of interpretation is the choice of the context itself. Let context include temporal and spatial location, speaker, and possible world. Since (as shown above) the first-person pronoun need not refer to the speaker despite the character of "I," we must choose another speaker, impersonated by the

[9] See David Kaplan (1989, sec. 7). The view suggested here takes more seriously the idea that there are choices as to what counts as context and circumstance.

utterer. In the answering machine cases, "here" may be the location where we listen to the message or where the message is played. Since we are not in the paradigmatic case of having the utterer in front of us, the default interpretation is rejected. When an actor produces F but is struggling with obvious pain through his lines, the interpreter, to overcome the dissonance, may adopt a non default context, in which the "I" in F does not refer to one person only. Selection of context in this sense requires delicate and subtle decisions, having to do with the reduction of inconsistencies (e.g., the actor uttering "I die" keeps breathing). The theory of Choice of Context is intertwined with all sorts of perspectives and beliefs that need not have anything to do with language.[10]

3. Syntax and its Discontents

The following two cases, of complex demonstratives and plural indexicals, provide good reasons for rejecting the theory of direct reference altogether. Consider

R: That is a church

and

S: This is a mosque

We incline to judge S and R true if the referents of "that" and "this" are a church and a mosque, respectively. Here the referent may be something the speaker has in mind, or prominent in her attention, assuming, perhaps, that others can grasp what the speaker refers to. When neither speaker nor hearers

[10] I suggest that the mechanisms that search for relevance are not specific to the language faculty but interface with other mental modules. Cf. Sperber and Wilson (1995). For an interesting attempt to find objective standards for what counts as context, see Gauker (1998). Yet Gauker seems to require a theory of everything, for he says: "But to get a really substantive answer to the question about the content of objective propositional contexts, we would have to address the question in light of a fuller theory of how by talking we affect one another's behaviour" (p. 170). An alternative is to see forms of interpretation as wholly normative; that involves a global notion of rationality and commitments to it. I, however, am not persuaded that we have anything like a global theory of rational commitment. For now, suffice it to say that approaches beyond semantics (i.e., pragmatics, charity, etc.) account for the fact that contexts are not fixed; not even the context particular speakers and hearers have in mind on a given occasion.

fulfil these informal conditions, S and R are likely to be judged false or lacking truth value. Standard examples used in the literature include the hallucinating speaker (there is nothing really out there when S is produced) or a gross mismatch between the speakers' intention and the environment.

For simple demonstratives we share the intuition that "F(dem)" is true when the referent of dem is F, false when the referent of dem is not F, false or truthvalueless when there is no referent, or it is too far off track.[11] This is what the direct referentialist predicts: we hold a hybrid notion of reference that stands between what the speaker has in mind and the conditions under which an audience would converge on what the speaker has in mind, and perhaps also "what is said by the sentence itself," within or without its contextual elements. If

RP: That church is Palladian

is uttered in Venice in front of church of the Redentore, virtually all, given enough information, would evaluate it as true. However, consider

RT: That mosque is Palladian

uttered by Tansu who happens to have a single lexical item, "mosque," for all places of religious worship, yet have read enough about Venetian history to know who built the Redentore. Is RT true or false? There is no fact of the matter here. Indeed someone may say: "Tansu is partially wrong, for that thing is a church, but also right, for it was built by Palladio."

Did Tansu refer to the church of the Redentore? Speakers' intuitions differ. Some say "Yes," because of its perceptual saliency (Tansu would not attribute to Palladio a mouse or a computer). Others observe that we have that intuition only because the predicative part of the complex demonstrative in RT applies to a very limited set of objects. To test your own intuition, use the following setting. Tansu utters RT pointing to the Redentore while a giant mouse gets in between her finger and the church. Now it is unclear what one is supposed to say. Perhaps "reference," as we use it in philosophy of language, is a semi-technical notion with no equivalent in natural

[11] See, e.g., the example invented by David Kaplan. We know the speaker worships the philosophy of Rudolph Carnap, and are invited to evaluate an utterance of "That is the greatest philosopher of the 20th century"; but the portrait of Carnap that was hanging on the wall behind the speaker's back has been removed (or replaced by a photograph of Spiro Agnew).

languages.[12] It is an artefact of our theories more than something that carves nature at its joints. That would explain why often the technique of asking speakers their reflective judgements in matters of reference yields very equivocal responses.

In my view, we do not possess a clear-cut intuition on the truth value of such utterances: they are semantically underdetermined. Many factors may guide truth-value assignments to them. The complex demonstrative "THAT α" has four possibilities: both "THAT" and "α" determine truth conditions, neither does, or one but not the other are truth-conditionally efficacious. Larson and Segal (1995), in a standard treatment of truth-functional semantics, concede that all possibilities are open (sec. 6.4, pp. 211ff). The NP that follows the determiner may or may not play a constraining role on reference and truth value. It is an empirical matter to decide which is correct. The orthodox theory suggests that the direct reference approach carries over to the complex demonstrative cases with no need for adjustments. Recent developments say otherwise.[13]

Consider

(1) Every father dreads that moment when his oldest child leaves home. (King 2001)
(2) Most skiers remember that first black diamond run they attempted to ski. (King 2001)
(3) No child likes to envisage that day on which she is orphaned.

To many speakers, (1), (2), and (3) appear to lack one essential feature of paradigmatic direct reference. Direct-reference theories hold that by using a demonstrative we pick an individual and (dropping semantic niceties for a moment) we talk about that individual. Much of the anti-Fregean emphasis derives from the force of this intuition. Rigidity is an additional effect: we pick out an individual; once picked out, we talk about it even across possible worlds. Not coincidentally, direct-reference views resemble Saul Kripke's

[12] In Chomsky's view, semantics is captured by features that lexical items have within I- (internal, individual, intensional) languages.

[13] Cf. King (2001), which is pointing out a real methodological dilemma for the semanticist. See my notes on it in a review to be published in *Studia Logica*. The "naïve" theory of complex indexicals is argued for and defended by Eros Corazza (forthcoming). I thank Eros Corazza for providing his paper and permitting me to quote from it.

view on proper names. The referential device operates with different modalities of completion. In one version of some theories we need some overt gestural demonstration, maybe an ostension. In other versions, a mental state somehow capable of being manifested to hearers is the prop we use. Once the individual is picked, it and only it enters as a component of propositional content, not the demonstrations, the intentions of speakers, or a Fregean *Sinn.* Rigidity follows, since the individual referred to is the same across possible worlds. Thus one may utter truly "it is possible that I am dead," fully aware that dead people do not utter anything. If we think complex demonstratives behave in the same way, contributing the individual (or some representation of it) to the propositional content, (1)–(3) ought to give us pause. The surface structure presents a complex demonstrative that needs no demonstration, no directing intention. Informally it is clear that there is no particular moment, ski run, or day one has in mind. The same seems correct of demonstratives cum demonstration theories: one need not point at anything in order to think (1)–(3), utter them, or make them understandable to an audience. In (1)–(3) "that" is replaceable without loss of content with the determiner "the." Accepting Russell's view of the definite description, we may be inclined to see (1)–(3) as having a quantificational nature; yet we cannot rely on intuitive judgements in semantic matters. While we have an excellent language faculty to spot un-sentential constructs, we do not have a device that makes terms' reference immediately legible. Consider "Who said he liked the pictures that John took" (Chomsky 1995, 192): John is not he ("John" is not coreferential with "he") in this sentence. And this property of the sentence does not depend on any particular view of reference one has.

I now examine two sets of arguments. One depends on a certain view of syntactically traceable referential properties; the other depends on a battery of tests. Corazza (forthcoming) overcomes difficulties with complex demonstratives by multiplying the (propositional) entities. He sees the contribution made by the nominal part of a complex demonstrative as a parenthetical remark. King (2001) advises abandoning direct reference for complex demonstratives. He leaves it open whether the case of simple demonstratives should be treated along similar lines or not. The thrust of King's treatment is to reduce multiplication of entities and ambiguities to the minimum. Corazza's thesis is that the contribution a complex demonstrative makes to propositional content is identical with the contribution made by a

simple demonstrative. Counterintuitive consequences indicated by examples such as RT are dealt by multiplying propositional contents. One is "official," others are "background" propositions, more or less along Gricean lines. The price the naive theory must pay depends on the balance between the pragmatic and the semantic side of interpretation. I suggest only that some of the arguments endorsed by Corazza are less than clear. He observes that we intuitively grasp the synonymy of sentences like "The man hates that woman addressing him" and "The man hates the woman addressing him." On the basis of this judgment of synonymy, some, e.g. Lepore and Ludwig (2001), assimilated the semantics of complex demonstratives to the semantics of the determiner "the."[14] I assume as background Russell's quantificational treatment of the definite article. Corazza claims correctly that while we accept substitution of "that" with "the" in cases like the ones just cited, we do not accept replacements of "that" with "this." He devises an ingenious test of replacement salva grammatica to determine whether lexical items belong in the same category or not. The test delivers ambiguous results. Given that we have valid substitutions of "that" with "the" and not with "this," the logical outcome seems to be that we have to decide whether "this" and "that," or else "the" and "that," belong together in the same category. Corazza suggests that these complex demonstratives are different words altogether; they are morphological clones of the simple demonstratives, but the final tally is analogous to classical ambiguity ("buff," "race," etc., where the morphology, phonology, spelling are identical but there are two lexical items.)[15]

[14] The literature on complex demonstratives is extensive; I selected Corazza (forthcoming) and King (2001) because they serve my purpose in pointing to different approaches. One can learn much also from Dever (2001), Braun (1994), and Borg (2000).

[15] A further test devised by Corazza is translating sentences into Italian and French with complex demonstratives (with binding). My impression is that the situation in those languages is analogous to the English case: native speakers untainted by theory do not always agree on the nature of "that woman." Philosophers are quick to point out the differences in scope. Similar considerations involve cases of negation. Corazza claims that the three sentences:

(56) That, who is a man talking to Jane, is not charming her

(57) That, who is not a man talking to Jane, is charming her

(58) That, who is not a man talking to Jane, is not charming her

resemble in the second and third case the celebrated "Green ideas sleep furiously." But replace Jane with Eve and point to a snake: you have a perfectly clear interpretation.

King (2001) takes a different view. Complex demonstratives are quantificational in nature. With respect to simple demonstratives, he remains on balance noncommittal. King presents arguments to the effect that we often lack intuitions vis-à-vis sentences containing complex demonstratives reflecting an understanding of them as singular propositions. Sentences like (1), (2), and (3) above do not exhibit the properties indicated at the beginning as characteristic of singular reference. There is no rigidity in the reference of "that day" the child doesn't like to envisage (3). There is no sense in which we have recourse to the intentions of the speakers. If we do, it appears that the use is a plural reference: for any given child there may be that moment, and each moment is not identical with any other. Cases with no binding conditions appear to lack rigidity as well. Consider a lecture in which the speaker utters "That hominid who discovered how to start fires was a genius" (King 2001, 11). We assess truth values for the sentence in the actual world where, as a matter of historical fact, the discoverer of fire was hominid H who was indeed very intelligent. The sentence is true. In a counterfactual situation fire was discovered by sheer luck by K, an idiotic hominid playing during a thunderstorm. Is the sentence uttered in the actual world true? I vacillate.

Further and independent evidence of the intuitive difficulty of treating at least some cases of complex demonstratives as directly referential can be gleaned from a phenomenon that is not easy to assess semantically. Suppose that (1) above is completed along the following lines:

1.1: Every father dreads that moment when his oldest child leaves home and that moment has come.
1.2: Every father dreads that moment when his oldest child leaves home and that moment has come for you.

1.2 is felicitous, while 1.1 sounds like an invitation to ask "For whom did the moment come?" This intuition gives the impression that in 1.1 the first instance of complex demonstrative is not a rigid designator and we need a specific individuating device to pinpoint rigidly an individual.[16]

In syntactic theory a level of syntactic representation is made up by phrase structures derived from the surface materials by way of transformations/

[16] I thank Daniel Herwitz, Don Ross, and the audience of my presentation in Stellenbosch, SA, for probing these examples.

derivations.[17] The output is made legible to the semantic component. This is the LF level, akin to what philosophers of language call "logical forms," but not identical to it. In particular, LF is not necessarily bound to assignment of truth conditions. Its key notion is the notion of movement. King uses the idea that quantifier expressions "move" during syntactic computation and leave behind traces. E.g., in "every girl loves some boy" the transition between S-structure and LF generates two different readings, providing an explanation of ambiguity. Unlike quantifier phrases, referential expressions (proper names, etc.) do not undergo movement and leave no traces. Now, complex demonstrative phrases exhibit the behaviour of quantifier phrases and not of referential expressions. The same behaviour is exhibited in weak crossover cases. These phenomena are robust and do not depend on special intuitions. King (2001, 17–21) proposes that syntactically we have good reasons to treat

T: Tiger birdied every hole that Michael did.

and

T1: Tiger birdied that hole that Michael did.

on a par. Since both are acceptable, the LF movement (namely, the movement cum trace-leaving) is the same for the quantifier phrase "every hole" and the complex demonstrative phrase "that hole." Such crossover phenomena are not exhibited by referential expressions. Consider: "His wife loves every man" where the possessive ("his") is not anaphoric on "every man." In that case the sentence does not mean that every man is loved by his own wife. Consider on the other hand the natural reading of "His mother loves Leo," meaning that Leo's mother loves Leo. If this is a robust pattern (no anaphoric readings for quantifier phrases, anaphoric readings possible for referential expressions), complex demonstrative phrases again fall within the syntactic camp of quantifiers. King proposes "His mother loves that man with the goatee" as a typical case in which "his" is not anaphoric on "that man with the goatee," i.e., it is not the case that the goateed man's mother loves the goateed man. I am inclined to think that King is right on this issue.

To what extent we ought, then, to reform the orthodox, direct referential, view? And what is the lesson of it for the philosophy of language?

We can decide that cases of complex demonstratives are somehow

[17] For a simple introduction, see Culicover (1997).

parasitic. Corazza acknowledges that in some cases the complex demonstrative goes proxy for a definite description. He terms those "idiomatic uses" and takes it that these uses of "that F" are emphatic ways of saying "the F." Hence a form of ambiguity is proposed. King (2001, chap. 5) argues (on a sort of Ockham's razor) against any claim of ambiguity. However, since ambiguity is a robust feature of the lexicon, why exclude it in this case? More important is a question of taxonomy with regards to indexicals. The Kaplan-Perry taxonomy puts indexicals in a variety of syntactic-grammatical theories (some are pronouns, some are adverbs, some, like tense markers, can be morphologically almost anything in their phonetic/written realisation). Yet if complex demonstratives behave differently, we have to break that taxonomy: "I" and "that F" may then have very little, if anything, in common. The considerations in the first section were taxonomical considerations internal to the theory. It may very well be that we did not get straight the distinction between pure and demonstrative indexicals. The considerations here adduced suggest that we may have the wrong taxonomy altogether: we may be grouping together referential and quantifier phrases, blinkered by our intuitions on their being used "to talk about" some one thing.

The second issue is more basic. We have to decide whether to treat language as transparent to intuition, more or less untutored, or to trust the deliverance of the only science of language we have, namely, phonology and syntax. Yet it may be odd to cite quantifier phrases movement and weak crossover anaphora phenomena as evidence about reference, for such phenomena are discovered; they are not apparent at surface level, and their discovery requires the postulation of a rich apparatus, a framework of principles and parameters. The only semi-inductive argument available is that the deliverances of formalised sciences are more reliable than intuitions. We do, after all, have extremely clear intuitions about the simultaneity of events, with no parameters at all, yet we were shown by physics that it does not exist. The moral is that in dealing with indexicality we need to consider what syntax tells us in far finer detail than we used to.[18]

[18] For my applying the duality of the manifest image and the scientific image to language see my review of Noam Chomsky, *The Architecture of Language*, ed. Nirmalanshu Mukherji, Bibudhendra N. Patnaik, and Rama K. Agnihotri (New Delhi and Oxford, Oxford University Press, 2000), available at http://linguistlist.org. I am grateful to Mukherji and Ludwig for their opinions.

4. More Syntax and More Problems

One of the perplexities of indexicality is that for every case we seem to be forced to make ad hoc moves. We constantly censor[19] the fact that even if granted a theory of direct reference, and its companion-theory of singular propositions, we do have plural indexical expressions. In the philosophy of language we expect a match between the intuitive contributions of terms to propositions and the assigned values within the theory. Ditto for a match between the intuitive truth conditions of sentences, possibly augmented by contextual factors and parameters, and the values assigned to the propositions by the theory. But consider these data:

P1: I am tired but we have to finish the papers for the book.
P2: We are great cooks, but I can't tell porridge from orange duck.
P3: All of us present at noon go to lunch at the local Pizza Hut.
P4: We go to Pizza Hut on Thursdays.
P5: We hold these Truths to be self-evident.[20]

P1–P5 display some major features of indexical terms, e.g., their contextual dependence. Like "now," "we" has a contrastive character. One could always think in non-species specific ways and argue that a universal "we" refers to all conscious beings. Even so, it still leaves out all sorts of objects. It requires that we integrate the information provided with much that is not there. E.g., there is at least one kind of content (in Perry's sense) such that to get at it, you must know who uttered P4, where and when, and more besides.

In keeping with the spirit, if not with the letter, of the Kaplan-Perry views, one's first reaction is to extend the treatment in the following way: "we" functions as a term with lexical features that force a plural reading. (The "we" usage by De Gaulle or the Bishop of Rome ought to be read, in my opinion, as "I and France," "I and God," etc.) Given this lexical feature "we" possesses a character, given by linguistic conventions. It is used by the utterer to refer to herself and one or more others. That content gets into propositions that may be called "individual propositions." The content of

[19] With the laudable exception of John Perry (1997). Perry cites some work of Richard Vallee, which I have been unable to get hold of.

[20] Bianchi (2001, 131) comes very close to what I have in mind, with similar data. She opts for the general view that "we" is parasitic on "I." The idea is partially correct and partially incorrect. See later in the text for the view that I propose.

"we" is constituted by the speaker together with others. Hence a token t of "F(we)" uttered by u is true iff u and others, determined by the tokening of t and its context, are F.

But this is just too vague. Who are these others? The very spirit of the singular proposition approach may be questioned. It is not at all clear whether the original proposal was to be extended to plurals as well.[21] One proposal may be, that plurals such as "we" require yet another category of indexicals: mixed indexicals, that function both as pure indexicals and as demonstratives. As pure indexicals they retain the automatic feature that when uttered they refer to the utterer. As demonstratives they retain an intentional feature: it is up to the utterer's demonstration or her mental states to determine who the others are. The "we" in P1 works along these lines. The utterer picks himself as referent of "I" in the first conjunct. The "we" in the second conjunct bunches together within its reference the utterer and others who have to finish up the book. Membership in the set {others} is determined by the intentions of the utterer, since no member of said set is demonstrated by the utterer. Proof: I just did refer to them without ostension. This is one possibility. We may name it, after Corazza, "the naive theory of plural indexicals." It fits nicely with our intuition that in using "we" the speaker engages herself together with a contextually given community.

Further evidence for the hybrid status of plural indexicals comes from the phenomenon of quasi-indexicality, pointed out by Castañeda. In quasi-indexicals we try to capture the first-person character of some self-attributions. There is a difference between reporting 'I am tired' by saying "A believes he* is tired" and "A believes A is tired." The latter is noncommittal as to the specific mode of self-attribution, the former is not. Reports that involve plural indexicals are also hybrid, having a double status of transparent and opaque readings.

However, the sketch provided just now is not enough. It is not always the case that an utterance of "we," with the "we" in subject position, includes the utterer. P4 may express a true proposition even when the utterer does not go to Pizza Hut on Thursdays. The situation can be paraphrased thus: all of us, who are around the office at 12, go out for pizza every Thursday, but the utterer is not around the office at that time. What is going on? The plural

[21] It is similar to the predicament of a Russellian who needs to square the uniqueness clause of a definite description with the fact that sentences like "the girl envies all girls" are perfectly acceptable, yet require many girls to get off the ground.

indexical "we," I suggest, functions also as a quantifier. P4 can be read as a general proposition containing a restricted quantifier. Semi-formally, "for all x such that F(x), x goes to Pizza Hut on Thursdays." The restrictive clause may or may not be explicit,[22] and may be imparted in pragmatic ways. If I am even halfway correct "we" has a strange sort of ambiguity. It can be a restricted quantifier since it hardly makes any sense to take "us" to be all sentient beings. The restriction is explicit in P3, but not in P4.

"We" can also be a mixed indexical with a hybrid status. When the hybrid indexical prevails, the utterer is a member of the domain of the quantifier, when the quantificational aspect is dominant, the utterer may or may not be in the domain. I do not see anything other than the intentions of the utterer to decide which of the two possible readings prevails. Note that one may force one particular reading. P2 provides an example of this phenomenon. According to the definition proposed the utterer of "F(we)" is speaking truly when he is F and others are F as well. P2 is, then, a contradiction, for he who cannot tell porridge from orange duck is not a great cook. I am precisely in that condition; still I may utter P2 truly if I use "we" as a proper demonstrative. It is only my mental state that determines the proper domain of application, which is, in this case, the Italians (I am one). Thus, I suggest that we can interpret the quantifier as a generalised quantifier (along the lines of, e.g., "most"). The intuitive reading would then be "Most of us [Italians] are great cooks, but I am not."

The cases proliferate. "We" can be used on behalf of a real or imaginary community, a community of which the speaker may or may not be in fact a part. One could think of a vicarious use or even a purely idiomatic one: in political contexts one speaks on behalf of some constituency which may or may not be including the speaker. Again, cases of this form are best seen along the lines of demonstratives, in which speakers' intentions determine the proper restriction of the domain of application.

This brief excursus on plurals is not a knock-down argument against the direct-reference theory, but it hints at a picture more complicated than the one presented by it. Indexicals are not just devices of singular reference. They are not only used to fix our semantic gaze upon a particular individual. They serve multiple functions, and while they remain under the influence of contextual factors that are not exclusively anaphorical, they do have

[22] Corazza does not deal with plurals but makes a similar point regarding some form of appositions and parenthetical remarks. In his view the parenthetical remark is at most a pragmatic aid, not a part of the semantics.

quantificational readings. If this is correct, it becomes an urgent task to see whether we face semantic ambiguity or ought to re-explore the entire issue of singular reference in the philosophy of language.

5. Metaphysics

If indexicality is essential, in a Castañeda-Perry sense, must we adjust our metaphysics? The assumption can be phrased as follows. We encounter indexicality with different morphological realisations throughout natural language. That shows something about human minds. Indexicals are essential at least in the sense that an outright elimination of them would deprive us of necessary cognitive tools. Take the case (taken from John Perry in "Essential Indexicals" in 1993/2000) of a bearded man who observes in the closed circuit camera of a store that a bearded man is spilling sugar from a cart, making a mess of the floor. The man's entire set of motivational, behavioural, belief conditions is sensitive to the format the belief takes. One format is, "That bearded man is making a mess." Another one is: "I am making a mess." Both beliefs are true if the bearded man is the believer. The latter format is available once the man recognises the bearded fellow as himself. The former format is available on many other perceptual/conceptual stories. Now, the former format has different implications, most prominently for preferences and desires. Virtually all people, given the same set of preferences, will act differently if they take in the first-person format. The moral is that there is a feature captured by indexicals that is essential to us.

Granted the essential character of this class of terms, we realise that indexical sentences have truth conditions when used in assertoric mode. Should we assign the same truth conditions to both kinds of sentence or should we have two distinct sets of conditions, one for each format? The same situation makes true both "I make a mess" and "that bearded fellow makes a mess" if I am that fellow. I wish to defend this intuition.

Others prefer to consider a more elaborate theory: we assign truth conditions to assertoric sentences which, in turn, refer to facts. Facts are taken to be basic ingredients of the universe. If indexicality has ontological consequences, a fact-based ontology has to countenance both index-free facts and indexed facts. Two different kinds of fact gain admission to ontology: a non-indexical fact makes true my thought and utterance "that bearded fellow makes a mess" and an indexical fact makes true my thought

and my utterance "I make a mess." The latter case is best described as self-awareness: I am aware of me qua myself making a mess.

Let me try to piece together a picture of what indexicality does and why no one can make do without it. That picture has to be checked against our ontological needs. The principle of economy suggests the most parsimonious ontology, though another may remain a possibility. My claim is that we are not forced to admit new facts even if we subscribe to an ontology of facts as basic ontological components.

6. Thoughts

If the gods were to create human minds without indexicals, their job would be endless. For no matter how many names a memory can store, their number is finite: it can be large, but not infinite, for memory itself is a finite storage system. For each individual I have to address I would have to add a specific referring device. Human culture did develop a lexicon of names of people, of cities, of books, of pets, and what have you. All the same, the task is daunting. Each time I address you, I would have to use your name or some other sign uniquely associated with you (e.g., a definite description). Yet our capacity of cognition far outstrips our lexical capacities, and not just because of the size of storage problem. For example, the number of hues we can distinguish is far larger than the number of lexical entries that name colours, yet we can identify and re-identify a thought about a particular hue which we may assume is nameless. One may want shoes of *that* particular colour, nameless in one's language. The linguistic indexical can be seen as a counterpart of the term in the language of thought. The gods would more economically design our lexicon by giving us indexicals to have an endless supply of ephemeral referential devices. The ephemeral character of indexical reference turns out to be an advantage. We can discard "that colour" once the thought did its work, and re-use that label for another job. Similar considerations hold for temporal indexicals. In reality there is nothing like *now;* there is no privileged temporal point which is the present. Yet, as Perry (1999) shows, in our conceptual system there is a difference between the belief that the seminar starts on the 29th of October and the belief that the seminar starts *today.* These considerations illustrate a disjunctive thesis. A language can be designed that is indexical free: mathematics is such a language, natural language is not. We have a sophisticated device that lets the lexicon have enough slack to refer to

anything with a systematic syntax that permits re-identification, anaphora, and so forth. That system is very efficient in connecting our conceptual repertoire with perceptions and with action.

In summary, one aspect of indexicality is identifiable with the richness of our cognitive capacities and the relative paucity of our lexicon. Perception- and thought-contents are too rich for words, but we match that richness by letting in indexicals. Since we function in an environment that changes all the time and address all sorts of interlocutors, it is handy to possess devices that we can re-use ad infinitum. This aspect jibes well with one feature of our cognitive makeup.[23] Using the multipurpose "that colour" or "that noise," we can identify, re-identify, and express thoughts that were otherwise ineffable. We also have in our conceptual system a notion of the self that is not captured by any name we have, perhaps even by any name we could have, but is expressed by the first-person pronoun. As Perry (1999) says, that notion is needed to mobilize us in "attached" terms. Dates are not enough for action, because dates are detached. No matter how long and detailed is our knowledge of the calendar, nothing will tell me that the seminar is tomorrow, unless I know that *today* is the 28th and the seminar starts on October 29th. So, there are aspects of our cognitive functions that require indexical thoughts and/or sentences. The latter may be used to express the thoughts or to be the raw material out of which we can produce utterances. This is what is essential in the essentiality of indexicals: they are essential for us. We cannot leave home without them, no matter how good are the cognitive maps of the universe we memorize or carry about. Unless I know where I am, the level of detail in the cognitive map is worthless.

7. Universes and Strings

Does this cognitive indispensability of indexicals imply that we have to enlarge our ontology and make room for indexical facts? No. Let us examine

[23] See Perry's 6th Jean Nicod Lectures (1999). Perry uses his views on recognitional capacities to rebut the knowledge argument, concerning what a formerly blind physicist would come to know upon seeing a ripe tomato. I, too, think that there are links between arguments claiming that if feature F of X is not captured by its feature G, ontology must make room for something to ground F. In the present context, note that "He is late" and "I am late" have different motivational force even when he=I. It is thus tempting to infer that there are first-person facts, captured by first person indexical sentences, and by nothing else. I think we can resist that move; see my article (forthcoming).

the main argument for indexical facts. Consider Steven Voss' following argument:

> First we need to have some idea of the conditions under which a fact would qualify as an indexical fact. Suppose, for this discussion, that I, SV, the man in the blue shirt, am wise. There are really three facts here: (a) I am wise; (b) SV is wise; (c) the man in the blue shirt is wise. The first is indexical and the second two are not. We know that a sentence is indexical when it contains an indexical term. But what makes the fact that I am wise indexical? You might reply that the fact that I am wise is identical with the fact that SV is wise. But these are two different facts, since I can know one of them and not know the other one—if I happen to forget that I am SV. (Premise: if p knows Fact 1, and Fact 1=Fact 2, then p must know Fact 2.) Similarly the fact that I am SV is important. Therefore it is not the same fact as the unimportant fact that SV is SV.[24]

Voss offers here a criterion, assuming that facts have epistemic properties. He talks about the properties of fact 1 of *Being Known,* and *Being Important.* Yet these properties are necessarily relational; they are related to our interests: I take it to be self-evident that it may be very important for X, and entirely unimportant for Y, that fact 1 be F (I do not say that this disqualifies them from being bona fide properties). Voss suggests that the relational properties *Being Known [to X]* and *Being Important* distinguish between facts. Is possession by fact 1 of a relational property not possessed by fact 2 sufficient for making them distinct facts? By Leibniz's law the answer is, yes. The argument is valid. So, we have to assess the credibility of the premises. The structure of the argument is the same as the celebrated Cartesian move from "X is conceivably F" and "it is not the case that Y is conceivably F" to the conclusion "X is not Y." Regardless of the opinion one has of Cartesian metaphysics, there are reasons to resist the application of this argument to indexicals.

Consider the baroque structure our ontology would have to have. We have different facts making true any temporal indexical sentence and its indexical-free counterpart. The fact that it is now (where I am) 8 p.m. is not as important as the trivial fact that 8 p.m. is 8 p.m. The fact that I have to leave now is not as important as the fact that I have to leave at 8 p.m. I may know that I have to leave at 8 p.m. and not know that I have to leave now. The same can be said of spatial indexicals; etc. The situation is analogous to the one that prompted Frege to distinguish *Sinn* from *Bedeutung*. This generates infinitely many facts, or at least up to the cardinality of the set of possible users of indexical terms.

[24] From a manuscript by Steven Voss. Thanks are due him for letting me use it.

If there are facts, the very same fact can be referred to in different ways. "Today X collapsed" uttered on 11.9.2001 is true iff "X collapsed on 11.9.2001" is true. Analogous considerations apply for space indexicals. Tense masks the trace of an unarticulated, unexpressed, time indexical. If we follow this pattern we do not need to introduce two distinct sets of facts. "It is hot in here" has as truth-maker a place, temporal properties, and thermal properties. There are indeed differences between the two ways of expressing the same facts, but these differences can be accounted for by means of token reflexivity. The only extra step that I propose is to apply the principle of parsimony for ontology.

The logical and conceptual devices we need are readily available. Perry proposed to reject the uniqueness of content of statement or a thought, reserving the role of fixing truth conditions to the *subject matter*. The subject matter of a sentence or a thought is what they are about. Formally, subject matter determines truth value under constraints. Hugh Mellor shows how one can obtain an additional payoff by adopting similar token-reflexive notions in dealing with Bradley's philosophical conundrum.[25] These formal devices keep the recognition that at some level of analysis we have no way to reduce indexical sentences to indexical-free ones, yet that need not impose a larger ontology with more facts, such as I-facts, here-facts, and now-facts, etc.

8. Let's Talk About Me

"Everyone is presented to himself in a special and primitive way, in which he is presented to no one else," writes Gottlob Frege.[26] This is a succinct

[25] See Perry (1999) and Hugh Mellor, *Real Time* (Cambridge University Press, 1981), and *Real Time* II (Routledge, 1998).

[26] See note 7 above. It is interesting to note that in his unpublished Logic (probably dated 1897, now in Frege 1977, 126–151), Frege toyed with ideas coming very close to the intuitions behind the more recent theories. For instance he wrote: "A sentence like 'I am cold' may seem a counterexample to our thesis that a thought is independent of the person thinking it, in so far as it can be true for one person and false for another, and thus not true in itself. The reason for this is that the sentence expresses a different thought in the mouth of one person from what it expresses in the mouth of another. In this case the mere words do not contain the entire sense: we have in addition to take into account who utters it. There are many cases like this in which the spoken word has to be supplemented by the speaker's gesture and expression, and the *accompanying circumstances*. The word 'I' *simply* designates a

expression of what is behind many an argument for the primacy of the I. It is detectable, e.g., in Thomas Nagel's position in the philosophy of mind. It may very well be true that some or all of the notions that I entertain about myself are not entertained by anybody else. It may also be true that, assuming the non- inter-penetrability of bodies, self-notions that derive from proprioception are not had by anybody else. Others have their own proprioceptive notions, not mine. But all that (granting the irreducibility of first-person thoughts) does not warrant the introduction of first-person facts. Here is my argument: If there are first-person thoughts, in order to qualify as thoughts, they must have satisfaction conditions. Satisfaction conditions can be entertained by anyone at all.

There are those who argue that some thoughts, if entertained in first-person mode, have unique properties. Famously Descartes argued that Cogito is self-verifying. Others think that judgements about sensation are immune to error if entertained in the first-person mode. Suppose that all of this is correct. There are some properties that contents expressed in first person have, and if one transforms those contents by replacing the reference in first person, those properties are lost. Examples of the missing properties are all sorts of epistemic and motivational forces. Then, by Leibniz's law, content CI [I think] is different from content CA [A thinks] even when A=I, for the CI has some property that the *prima facie* CA lacks (Bourgeois-Gironde 2001).

I reject that argument, for, by parity of reasoning, it commits us to here-facts, now-facts, etc. What I suggest is to multiply, not facts, but *thinkable contents*. Attributions and self-attributions of contents are extremely fine grained. The basic notion of contents is strictly tied to their truth conditions, but there is no reason why contents cannot have other properties that do not affect truth conditions. Our needs differ when we are engaged in psychological explanation. The properties cited by Voss above (*Being Important*, *Being Known*) are useful when we try to understand the agent. They are relevant to rationalisation and prediction of thought and behaviour. They are not properties we use in assigning truth conditions.

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different person in the mouth of different people. It is not necessary that the person who feels cold should himself give utterance to the thought that he feels cold. Another person can do this by using a name to designate the one who feels cold" (pp. 134–135, emphasis added).

In metaphysics we do two distinct jobs: look at the world and look at its constitution. We therefore may assign the same fact as truth-maker to both CI and CA, as long as we keep in mind that CI and CA play different roles in the mental economy of A. The more difficult question is whether there is a further sense in which something like CI can be grasped by someone other than A. Is this possible? Yes, as soon as one becomes A. Some, notably Thomas Nagel, think there is something unique about me that is not realizable by anything or anybody. Is that true? I do not think so. Reincarnation, perfect cloning, mental Xerox machines, may be absent from the actual world, but they are coherently describable, hence they are possible. I can be reproduced with the very same CA-type contents (not controversial) and the very same CI-type contents. On a stronger proposal, first-person thoughts of mine can be accessed by others, although their cognitive machinery is different. Quasi-indexicals depict indexical reference made by others. These linguistic, lexical, and syntactic devices enable one to put oneself in someone else's shoes (note that quasi-indexicals are supposed to be lexical items, detectable at the level of LF, even if not distinctly realized in the lexicon). So we have some device to capture CI-type first-person contents of others. The devices need not be purely linguistic, but require cognitive resources not limited to language. Frege talked of the 'unique way in which each one is presented to oneself'; Nagel went on to hint at one's being unique in a far stronger sense: if I disappear there is something the universe misses and nothing can replace. That I doubt. My thinkable contents can be accessed via different mechanisms, some of which involve different modes of presentation, and perhaps special cognitive capacities, such as pretence, meta-representations, and a specialized theory of mind. Such capacities are not well understood and their exact implementation may be somewhat different. This is an empirical psychological question.

We thus can, without enlarging our ontology of facts, admit that different kinds of content are present to conscious minds. Indexicality is a linguistic phenomenon that tracks in sophisticated forms our finely grained modes of attribution of contents. Metaphysically, we rest with facts and minds, nothing more.

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Bibliography

Bar-Hillel, Yehoshua. 1970. "Indexical Expressions," in his *Aspects of Language.* Jerusalem.

Bianchi, Claudia. 2001. *La Dipendenza contestuale. Napoli.*

Borg, E. 2000. "Complex Demonstratives," *Philosophical Studies* 97/2.

Bourgeois-Gironde, S. 2001. *Reconstructions analytique du cogito.* Paris.

Braun, D. 1994. "Structured Character and Complex Demonstratives," *Philosophical Studies* 74.

Castaneda, Hector-Neri. 1989. *Thinking, Language, and Experience.* Minneapolis.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, Mass.

Chomsky, Noam and Neil Smith. 2000. *New Horizons in the Study of Language and Mind.* Cambridge, Mass.

Corazza, Eros. Forthcoming. "Is There a Problem about Complex Demonstratives?" (ms.)

Culicover, Peter W. 1997. *Principles and Parameters.* Oxford.

Dever, J. 2001. "Complex Demonstratives," *Linguistics and Philosophy* 24/3.

Frege, Gottlob. 1984. "Logical Investigations" (1918-26), in *Collected Papers on Mathematics, Logic, and Philosophy.* Oxford.

Frege, Gottlob. 1977. *Posthumous Writings*, ed. H. Hermes, F. Kambartel, and F. Kaulbach. Chicago.

Gauker, C. 1998. "What is the Context of Utterance?" *Philosophical Studies* 91.

Kaplan, David. 1989. "Demonstratives," in *Themes from Kaplan*, ed. J. Almog, J. Perry, and H. Wettstein. Oxford.

King, Jeffrey C. 2001. *Complex Demonstratives.* Cambridge, Mass.

Larson, Richard and Gabriel Segal. 1995. *Knowledge of Meaning.* Cambridge, Mass.

Lepore, E. and K. Ludwig. 2000. "The Semantics and Pragmatics of Complex Demonstratives," *Mind* 109.

Palma, Adriano. Forthcoming. Review of Perry (1999/2001), *Journal of Consciousness Studies.*

Palma, Adriano. 1995. "Reconstructive Zeitgeist: A Note of a Popular View in Some Circle," *Philosophy and History of Science,* A Taiwan Journal 4/1: 95-104.

Perry, John. 2001. *Reference and Reflexivity*. Stanford.

Perry, John. 1999. *The Jean Nicod Lectures. Knowledge, Possibility, and Consciousness.* Cambridge, Mass., 2001.

Perry, John. 1997. "Indexicals and Demonstratives," in *A Companion to the Philosophy of Language,* ed. Bob Hale and Crispin Wright. Oxford.

Perry, John. 1993. "Frege on Demonstratives," in his *The Problem of the Essential Indexical,* pp. 3-49. Oxford. Expanded edition, Stanford, 2000.

Sperber, D. and D. Wilson. 1995. *Relevance.* Oxford.